

Alan F. Ciamporcero
Director

1275 Pennsylvania Avenue, N.W., Suite 400
Washington, D.C. 20004
(202) 383-6416

PACIFIC X TELESIS
Group-Washington

March 24, 1997

EX PARTE OR LATE FILED

RECEIVED

MAR 24 1997

Federal Communications Commission
Office of Secretary

EX PARTE

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: CC Docket No. 96-45, Federal-State Joint Board on Universal Service

The attached letter was sent today to Elliott Maxwell, Deputy Chief of the Office of Plans and Policy. Please associate this material with the above referenced proceeding.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,



cc: Lygiea Ricciardi
Astrid Carlson

No. of Copies rec'd
List ABCDE

051

March 21, 1997

RECEIVED

MAR 24 1997

Elliott Maxwell
Deputy Chief
Office of Plans and Policy
Federal Communications Commission
1919 M Street, N.W., Room 822
Washington, D.C. 20554

Administrative, Information, Communications
Section

Re: Federal-State Joint Board on Universal Service, CC Docket No. 96-45:
Questions Regarding Health Care

Dear Mr. Maxwell:

We write to follow up on our *ex parte* meeting with you earlier this month, and to provide further support for Pacific Telesis Group's recent comments on the health care aspects of the *Federal-State Joint Board Recommendation on Universal Service*, CC Docket No. 96-45. We make the following points:

- One size does not necessarily fit all. The Commission should not mandate a certain transmission speed, such as T-1 speed, as a required minimum.
- ISDN and other sub-T-1 speed services work very well for telemedicine projects in California. We describe several of these projects in detail below.¹
- The Commission should not equalize distance-sensitive costs incurred by urban and rural health care customers.
- The Commission should not mandate infrastructure buildouts as part of its decision on the health care aspects of universal service.

¹ We understand from our meeting with you that you are familiar with Pacific Bell's CalREN program. When CalREN funding began, project funding recipients were offered any amount of bandwidth and, with the exception of academic institutions who selected ATM speed, the recipients selected ISDN speed as adequate. None believed that a higher speed was a requirement for health care delivery. Some of these CalREN projects are highlighted here. We would be happy to supply more information on any of the projects outlined herein, or CalREN, if you feel it necessary.

1. *One size does not necessarily fit all.*

The Commission should not mandate a certain transmission speed, such as T-1 speed, as a required minimum speed for all lines provided to health care providers as part of the universal service program. Instead, carriers should have a *choice* in determining the level of services they deploy to health care providers, as long as they can deliver certain essential services, described below. The carrier's choice is imperative in order to guard against unreasonable demands from unreasonable customers whose unchecked requests could require the carrier to incur unreasonable expenses to build out facilities where reasonable alternatives already exist.

If, as in Pacific's case, the carrier can demonstrate that a slower speed or less robust capacity, such as ISDN, meets the needs of the provider, then it should be allowed to provide this service. If, on the other hand, it makes more economic sense for a carrier to deploy faster lines, such as T-1 lines, the carrier should have this option, so long as the health care provider receives essential services. Such a rule would recognize that different regions are expanding their telecommunication infrastructures in different ways. In California, ISDN is deployed throughout the state. In some states, on the other hand, T-1 has been deployed in the preponderance of the state.

Because of these regional differences, we believe that there should not be a nationwide standard; rather, the mandated level of transmission speed should be the service currently deployed in each individual region. This is the most competitively neutral result: the Commission should not mandate a system that favors one type of service or technology over another; rather, as you indicated in our *ex parte* conversation earlier this month, the Commission should permit any transmission speed *up to* T-1 (1.54 Kbps).

In this regard, we believe the Commission should focus on whether certain essential *services* can be delivered to patients using telecommunications, rather than focusing on or dictating the *technology* used to deliver the services. In our view, the essential services available to rural patients and providers should consist of the following:

- Health care provider-to-patient communication over telephone lines to allow teleconsultation.
- Capability to send and receive data and medical images such as x-rays.
- Patient examination and counseling using electronic instruments such as electronic stethoscopes, ophthalmoscopes, otoscopes and EKGs.

- Ability to transmit electronically the results of examinations conducted by the foregoing electronic instruments to assist the health care provider stationed at the remote end with diagnosis.

We recommend that the Commission periodically update this list of "essential services," so that it reflects what telemedicine projects and health care actually need and use. A process of periodic reevaluation will help the Commission "recalibrate" its requirements to reflect actual practice in telemedicine projects around the country.

In support of our position that the Commission should permit any transmission speed, including ISDN, we would point out that in a survey of 84 telemedicine projects nationwide, it was found that 62 were using *sub*-T-1 speeds, ISDN or POTS lines. We believe that even in some states where T-1 is cited as the preferred transmission speed, the entire trunk is not used; rather, only a fraction of the T-1 is used.

The following are data reflecting transmission speeds used by telemedicine projects around the nation.²

Transmission Speed	Number of Locations
T1	22
1/2 T1	12
1/4 T1	25
ISDN	14
POTS	11

2. *Speeds less than T-1 speed work well for telemedicine in California.*

In California, telemedicine projects are using predominantly ISDN speed and some fractional T-1, with the exception of leading academic institutions experimenting with ATM Cell Relay for research purposes. What follows are examples of successful

² Source: Telemedicine Today, as reprinted by The American Telemedicine Association. Note that this source does not include ATM or switched 56 speed, both of which we describe in this letter. Switched 56, which operates at half the speed of ISDN, has been used successfully telemedically in three of the projects we describe in this letter. (See our descriptions of the Udkoff, Western Consortium and Heger projects herein.)

Elliott Maxwell
Deputy Chief
Page Four

California telemedicine projects working with far less than T-1 speed. We must caution that these descriptions are based on our best information about the projects described, and that any confirmation of this information or further input must be obtained from the projects themselves.

- *Telemedicine Emergency Neurosurgical Network ("TENN")*. The Sutter Solano Medical Center is a community hospital that provides medical care to the Sutter and Solano County region's residents, as the region is without neurosurgical care. Dr. Paul Chodroff, a neurosurgeon at John Muir Medical Center in Walnut Creek, developed the Telemedicine Emergency Neurosurgical Network ("TENN"). Should a patient be brought to Solano Medical Center with a neurological emergency, Dr. Chodroff or one of the other neurosurgeons available 24 hours a day can immediately review digitally transmitted CT scans to determine if the patient can be treated locally, or needs to be transported to John Muir.

The attending physician at Sutter initiates standard telephonic contact with the neurosurgeon "on call" and the CT images are sent *via ISDN lines* to the specified site on the receiving network. The TENN is comprised of 10 Macintosh computers placed in either a participating neurosurgeon's home, office or hospital. CT images or MRIs are transferred across digital lines in *four minutes*.

One recent success of the TENN project is the story a young girl who was injured in Solano County and brought into the Medical Center for evaluation. Prior to the TENN project's initiation, she would have been automatically airlifted to John Muir, as diagnosis would not have been possible from a remote location. Because of the TENN project, the CT image was transmitted to John Muir where the doctors noted that this patient *would die if she experienced increased altitude* -- something the doctors in Solano County could not have known. The TENN project literally saved this young girl's life, by *avoiding* an airlift. As of last year, the TENN project had actually avoided the cost of thirty transports costing \$4,500 each.

- *Department of Mental Health, Riverside County*. The Riverside County Mental Health Department is conducting a psychiatry program using ISDN. Emergency room psychiatrists give telephone consultations, supervision and direction to non-MD mental health workers in clinics, jails and outreach services. Video-conferencing technology is used for psychiatrists to provide face-to-face patient assessment and treatment. The project has seen a decrease in the need to bring rural patients to urban physicians. The services provided include triage, crisis evaluation, and initiation and continuation of psychiatric treatment for selected patients.

- *Western Consortium for Public Health.* The Western Consortium for Public Health is conducting a teleconferencing and remote-access demonstration project in California. Eleven out of 58 counties in the state are so geographically isolated that the state is chartered with providing public and environmental health services. Public health nurses are stationed in the isolated communities to provide these services. The nurses need the ability to provide public health services to their rural clients and also stay in close contact with their supervisors in Sacramento. In addition to demonstrating the effectiveness of telehealth and telemedicine, this project is also demonstrating the effectiveness of remote data entry/access via pen-based computing. The communications network uses ISDN and switched 56 Kbps service.
- *Remote diagnosis of abused children.* In 1993, Pacific Bell helped to fund a project which enabled the remote diagnosis of abused children. Still in operation today, the University of Southern California's Center for the Vulnerable Child Program links to distant desert locations using telemedicine for remote examination and diagnosis of children in rural areas in cases where physical or sexual abuse is suspected. High-speed ISDN and switched 56 Kbps service support multimedia teleconsultation allowing diagnosis, treatment and exchange of medical data. This project continues under Astrid Heger, M.D.
- *Lytton Gardens.* Lytton Gardens is another successful telemedicine project which began with Pacific Bell CalREN funding. It is, to our knowledge, the only skilled nursing facility using telemedicine in the nation, and is linked telemedically to Stanford University. The project utilizes 6 ISDN lines, and uses 512 Kbps for video with two lines left for data transmission. Stanford University's Liver Transplant Service is just one of the Stanford Medical Center departments using telemedicine to follow post-operation patients who are discharged from Stanford to Lytton Gardens following liver transplants. Other departments within Stanford using telemedicine include the vascular, plastic surgery and dermatology. We believe the involved doctors consider the ISDN transmission to be of diagnostic quality.
- *Stanford Medical Center's Community Outreach project.* Stanford's Community Outreach project is a telemedicine project which includes two other participants, the Drew Health Foundation and the San Jose Medical Group. The uniqueness of this program lies in the fact that urban East Palo Alto patients have always been referred to Stanford, but have often been unable to keep appointments because of the two hour bus ride required to travel the short distance to Stanford. Now, these same patients come to Drew Health Center instead, link up telemedically over ISDN lines with

Elliott Maxwell
Deputy Chief
Page Six

Stanford, and keep their appointments. EEGs and ultrasound test results are frequently transmitted and cardiology and dermatology are practiced -- all via ISDN.

- *Teleradiology Network in Ventura, California.* Dr. Ranon Udkoff in Ventura established a successful teleradiology network involving four sites using switched 56, which operates at *half* the speed of ISDN. As the MRI practice has grown, Dr. Udkoff has upgraded to 128 Kbps sent over frame relay. Dr. Udkoff considers images sent over 128 Kbps with zero compression to be perfectly adequate for a busy MRI center.³ We were informed of an extraordinary example of the network's effectiveness when it was still at switched 56 speed. A 29-year old rural woman gave birth to a healthy baby. A week later the woman was rushed to the hospital with headaches and visual problems. An MRI was scheduled and the results were scanned to Dr. Udkoff 70 miles away, as there was no radiologist available in the rural hospital to which the patient was admitted. Within thirty minutes the images had been transmitted over a switched 56 line to a filmless reading station. In this case, an unnecessary admission was avoided, as the patient's condition was not serious.

3. The Commission Should Not Equalize Distance Sensitive Pricing

We believe there is an important distinction between the *prices* rural health care providers pay -- that is, the bottom line figure on their bills -- and the *rates* they are charged for an increment of service. In our view, if an urban provider pays a *rate* of \$10 per mile for a distance sensitive service, the statute's only requirement is that a rural provider pay the same \$10 per mile *rate*. It may be that the price the rural provider pays is higher because it is more distant from the central office than is the urban provider, but so long as these *rates* are equalized, the carriers have satisfied the Act's requirements. In other words, a rural health care provider that is 100 miles from the nearest central office should not pay the same distance-sensitive net amount as an urban provider that is two miles from the central office.

We are mindful of the questions you raised regarding distance equalization during our recent *ex parte* contact. We will be sending a follow-up letter shortly which identifies large distance factors for urban customers.

³ Dr. Udkoff is willing to offer a testimonial should a member of the Commission be interested in speaking with him.

Elliott Maxwell
Deputy Chief
Page Seven

4. *The Commission Should Not Mandate Infrastructure Build-Outs*

We strenuously object to the Joint Board's recommendation to the extent it assumes that Section 254 requires carriers to *build out* their facilities to serve customers not currently served. This interpretation would swell the fund to insupportable levels, is unnecessary given current industry initiatives and build out schedules, would create incentives for carriers to finance infrastructure expansion from the universal service fund, and is inconsistent with the statute.

In addition to being exorbitant, requiring carriers to build out their networks by regulatory fiat may be unnecessary. Carriers already have aggressive build out plans, and are also engaged in private initiatives to bring telemedicine and other services to urban and rural health care providers, as well as other customers. There are currently over 130 telemedicine projects listed on the Telemedicine Information Exchange ("TIE") Web Page, which covers the entire nation. The American Telemedicine Association lists eight telemedicine projects in California, which is tied with Pennsylvania and North Carolina with the greatest number of projects in the country. California has other telemedicine projects which are not included on the TIE page because commercial projects are not tracked in the same way government projects are monitored. There are at least ten projects in California that we are aware of, more than any other state. In addition, recent legislation passed in California requires reimbursement of telemedicine expenses just as with face-to-face exams; we believe this law will stimulate demand for telemedicine, and that the market will respond to this demand on its own. Build outs will not be necessary.

Furthermore, it is bad public policy to subsidize large network upgrade projects with universal service dollars. Those carriers that have already built out their networks will be penalized by having to subsidize those that have not and seek to do so with universal service funding. In some cases, carriers will be funding build outs of their own competitors. Moreover, infrastructure build outs inevitably will be used for applications other than health care. However, once universal service fund dollars are spent on such upgrades, it will be difficult to reclaim them when carriers begin using new infrastructure for other uses.

Moreover, nothing in Section 254 requires construction of infrastructure in order to bring services to rural health care providers. The Joint Board appears to rely on Section 254(h)(2)(B) ("The Commission shall establish competitively neutral rules . . . to define the circumstances under which a telecommunications carrier *may be required to connect its network* to . . . public institutional telecommunications users."). (Emphasis added.)

Elliott Maxwell
Deputy Chief
Page Eight

However, Section 254(h)(2)(A) makes clear that any requirement that a carrier “connect its network to . . . public institutional telecommunications users” must be “technically feasible *and economically reasonable*.” (Emphasis added.) It is not economically reasonable to require carriers to build out entire new networks -- at high speeds -- to rural areas in order to bring telemedicine to rural hospitals.⁴ Nor is such a requirement “competitively neutral” (47 U.S.C. § 254(h)(2)), as it is probable that the burden of such construction would fall disproportionately on ILECs and carriers of last resort.

An across-the-board buildout requirement will subvert the economic reasonableness requirement of Section 254(h)(2). Because of this requirement, the Commission must either devise a process for individual determinations of the economic reasonableness of individual buildout decisions, or prohibit buildouts altogether.

Moreover, even if the Commission orders buildouts, it should not order *overbuilds* where there are existing facilities. Facilities-based competition should not be funded from scarce universal service dollars.

Finally, Section 254(c)(1) requires the Commission to consider the extent to which services “are being deployed in public telecommunications networks by telecommunications carriers” in determining their eligibility for universal service support. By definition, services which require build outs are not already “being deployed.” Because the health care provision of the statute does not state that Section 254(c) is irrelevant, Section 254(h) must be read in conjunction with the limitations in Section 254(c) so as to limit the range of services that will be funded by scarce universal service resources.

⁴ See *In the Matter of Implementation of Infrastructure Sharing Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-237, FCC 96-456, ¶ 20 (rel. Nov. 22, 1996) (“In determining what is economically unreasonable, we tentatively conclude that no incumbent LEC should be required to develop, purchase, or install network infrastructure, technology, facilities or functions solely on the basis of a request from a qualifying carrier to share such elements when such incumbent LEC has not otherwise built or acquired and does not intend to build or acquire such elements.”).

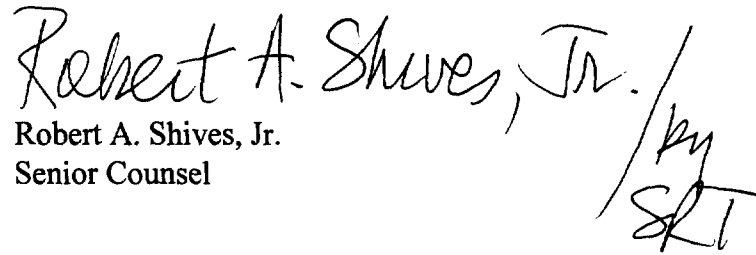
Elliott Maxwell
Deputy Chief
Page Nine

We appreciate your attention to our concerns.

Respectfully yours,



Sarah R. Thomas
Senior Counsel



Robert A. Shives, Jr.
Senior Counsel

cc: Lygiea Ricciardi
Astrid Carlson